CLAIMS

I claim:

1. An apparatus comprising:

a first plurality of electronic components defining an instant on computing device for use in a first instant on mode of operation;

a second plurality of electronic components, including a plurality of input and output devices defining a non-instant on computing device for use in a second non-instant on mode of operation; and

one or more switching mechanisms coupled to said input and output devices and selectively, to selected ones of said first and second plurality of electronic components to enable said input/output devices to be available for use in said first instant on as well as said second non-instant on mode of operation.

2. The apparatus of claim 1, wherein said first plurality of electronic components includes a first processor to execute instructions representing a first operating system and said second plurality of electronic components includes a second processor to execute instructions representing a second operating system.

3. The apparatus of claim 2, wherein said first plurality of electronic components includes a first memory device and said second plurality of electronic components includes a second memory device, and wherein said first and second processors operate simultaneously to synchronize data between said first and second memory devices.

4. The apparatus of claim 1, wherein said first or second plurality of electronic components includes a processor having at least two operating modes, wherein when in a first operating mode said processor executes instructions representing a first operating system, and when in a second operating mode said processor executes instructions representing a second operating system.

Sub D1

5. The apparatus of claim 1, wherein said one or more switching mechanisms includes a mechanical switch.

Sub B4

6. The apparatus of claim 1, wherein said one or more switching mechanisms includes a digital multiplexor.

Sub D2

7. The apparatus of claim 1, wherein said plurality of input and output devices include a keyboard and a display device.

Sub A2

8. An apparatus comprising:

an integrated circuit having a plurality of function blocks for use in a first instant on mode of operation;

a plurality of electronic components, including a plurality of input and output devices, said plurality of electronic components for use in a second non-instant on mode of operation; and

one or more switching mechanisms coupled to said input and output devices and selectively, to selected ones of said function blocks and said plurality of electronic

components to enable said input and output devices to be available for use in said first instant on as well as said second non-instant on mode of operation.

9. The apparatus of claim 8, wherein said plurality of function blocks includes a first processor to execute instructions representing a first operating system, and wherein said second plurality of electronic components includes a second processor to execute instructions representing a second operating system.

10. The apparatus of claim 9, further comprising a connector interface to couple said one or more switching mechanisms to said integrated circuit.

11. The apparatus of claim 9, wherein said plurality of function blocks includes a first memory device, wherein said second plurality of electronic components includes a second memory device, and wherein said first and second processors operate simultaneously to synchronize data stored within said first and second memory devices.

12. The apparatus of claim 8, wherein said plurality of function blocks or said plurality of electronic components include a processor having at least two operating modes, wherein when in a first operating mode, said processor executes instructions representing a first operating system, and when in a second operating mode, said processor executes instructions representing a second operating system.

13. The apparatus of claim 8, wherein said one or more switching mechanisms includes a mechanical switch.

14. The apparatus of claim 8, wherein said one or more switching mechanisms includes a digital multiplexor.

15. The apparatus of claim 8, wherein said plurality of input and output devices include a user input device and a display device.

16. An integrated circuit comprising:

a first processor block to operate in a first instant on mode of operation;

a second processor block to operate in a second non-instant on mode of operation; and

one or more switching mechanisms coupled selectively, to selected ones of said first and second processor blocks to enable data routing between said selected ones of said first and second processor blocks and a plurality of external devices.

17. The integrated circuit of claim 16, wherein said plurality of said external devices includes a user input device and a display device.

18. The integrated circuit of claim 16, wherein said plurality of external devices includes a first memory device and a second memory device, and wherein said first and

second processor blocks operate simultaneously to synchronize data between said first and second memory devices.

19. The integrated circuit of claim 16, wherein said one or more switching mechanisms includes a mechanical switch.

20. The integrated circuit of claim 16, wherein said one or more switching mechanisms includes a digital multiplexor.

21. An apparatus comprising:

a memory device having a plurality of memory banks;

a first operating system residing in a first range of said plurality of memory banks;

a second operating system residing in a second range of said plurality of memory banks;

a dual mode processor having at least two operational modes including:

a first high performance mode, and

a second low power mode; and

logic equipped to selectively provide said dual mode processor with said first or second operating system in response to said operational mode of said dual mode processor.